with that in the Ten Year, we find the annual proper motion in R.A. to be $-0^s\cdot078$ and in N.P.D $+2''\cdot0000$. This value is probably very accurate. The number of N.P.D. observations in the New Seven-Year is 103, and in the Ten-Year 184.

Blackheath : 1895 *May* 22.

Note on the Binary ι Leonis. R.A. 11^h 18^m 27^s, Dec. $11°$ $6'\cdot5$, 1895. ($3^m\cdot9$ and $7^m\cdot1$.) By Alice Everett, M.A.
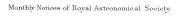
(Communicated by T. Lewis.)

Mr. Lewis, who had a suspicion that the companion star had passed the apse of its apparent orbit since Struve's time, suggested this binary among others to me for discussion. I have examined the measures, and, unless appearances are very misleading, think there is little doubt that the apse was passed recently, probably in the neighbourhood of 1880, and also, that maximum apparent distance was passed towards the end of the 'seventies, and that the distance is now diminishing comparatively rapidly. Another ten or fifteen years should settle the question, and as there seems to have been a tendency of late years to let the star drop out of observation, it is perhaps worth while to mention that there is at least a possibility that it is now at a rather critical part of its period. Measures were frequent from the time of Struve's first observation in 1827 until about 1883. I have not found any for the years 1885, 1890, 1891, 1892, and of those in the intervening years no two are by the same observer. This year's observation was made with the Greenwich 28-inch. The latest measures give—
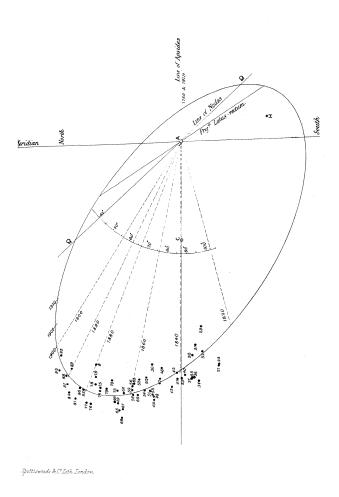
1893·35	$\theta = 59°\cdot5$	$r = 2''\cdot625$
1895·29	$\theta = 58\cdot2$	$r = 2\cdot492$

The position angle has diminished about $40°$ since 1827. The period can scarcely be less than a century and a quarter; I am inclined to think it is nearer two centuries, and it may be a good deal more. At the present stage the computation of a satisfactory orbit is out of the question, but I have made an attempt at a provisional orbit with the view chiefly of getting a trial ephemeris for the next few years. The results are—

$P = 178\cdot6$ years	$\Omega = 40°$ $15'$
$T = 1750\cdot6$	$\lambda = 249°$ $0'$
$e = 0\cdot7566$	$a = 2''\cdot486$
$\gamma = 65°$ $40'$	$\mu = -2°\cdot016$

Spottiswoode & C° Lith. London.

The following are comparisons between observed and computed positions made at about five-yearly intervals. The mean of the observations in any year is taken :—

	θ			r		
	O.	C.	C—O.	O.	C.	C—O.
1827·28	97·1	96·2	−0·9	2·30	2·09	−0·21
1829·37	93·9	94·5	+0·6	1·89	2·13	+ ·24
(1835·33)	(90·4	90·4	0·0)	(2·40	2·24	− ·16)
(1836·40)	(90·6	89·7	−0·9)	(2·43	2·27	− ·16)
1841·31	86·8	86·5	+0·3	2·40	2·35	− ·05
1846·31	82·8	83·5	+0·7	2·31	2·43	+ ·12
1851·42	80·4	80·7	+0·3	2·54	2·50	− ·04
1856·32	76·3	78·0	+1·7	2·53	2·56	+ ·03
1860·33	77·8	76·0	−1·8	2·60	2·61	+ ·01
(1865·43)	(74·4	73·4	−1·0)	(2·79	2·65	− ·14)
(1866·30)	(73·5	73·0	−0·5)	(2·73	2·66	− ·07)
1870·29	71·4	71·1	−0·3	2·52	2·68	+ ·16
(1875·28)	(69·4	68·7	−0·7)	(2·63	2·70	+ ·07)
(1876·33)	(68·5	68·5	0·0)	(2·82	2·70	− ·12)
(1879·36)	(67·8	66·8	−1·0)	(2·54	2·70	+ ·16)
(1881·35)	(65·1	65·8	+0·7)	(2·82	2·69	− ·13)
(1884·53)	(63·3	64·3	+1·0)	(2·78	2·68	− ·10)
(1886·37)	(65·1	63·5	−1·6)	(2·69	2·66	− ·03)
1889·16	61·9	62·1	+0·2	2·56	2·63	+ ·07
1893·35	59·5	60·0	+0·5	2·62	2·58	− ·04
1895·29	58·2	58·9	+0·7	2·49	2·53	+ ·04

Ephemeris.

1900·0	...	56·3	...	...	2·43	
1905·0	...	53·3	...	...	2·28	
1910·0	...	49·8	...	...	2·07	

Greenwich : 1895 *June* 14.

M M 2